

NOVEMBER/DECEMBER 2024

CEMB64A — BIOINOCULANTS
TECHNOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.



1. Abbreviate PGPR.
2. What is Bioinoculants?
3. Define *Frankia*.
4. Which selective media used for growth of *Rhizobium*?
5. Draw the structure of *Anabaena*.
6. Equation used for immobilization technique.
7. List out the phosphate solubilizing microbes.
8. What is known as phosphate solubilizers?
9. Name the type of mycorrhizae.
10. Define VAM.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss about mechanism of PGPR in plant growth.

Or

- (b) Illustrate the characterization and mass production of *Azospirillum*.

12. (a) Explain in detail about nitrogen fixation of *Rhizobium* in leguminous plant.

Or

- (b) Write an elaborate note on role of actinorrhizal nodule formation in non-leguminous plants.

13. (a) Explain the mass cultivation of cyanobacteria for the use of biofertilizers.

Or

- (b) Give a short note on benefits of *Azola* biofertilizers in improving crop yield and soil health.

14. (a) Write an essay on role of phosphate solubilizing microbes in improving soil fertility.

Or

- (b) Write about inoculum production and field application of phosphate solubilizers.

15. (a) Explain about VA Mycorrhizae and its assessment in roots.

Or

- (b) Describe the taxonomy and importance of mycorrhizae.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write a brief notes on different types of biofertilizers and their role in enhancing soil fertility.

17. Discuss the isolation, characterization and significance of *Frankie*.

18. Explain the large-scale production of *Anabena* in agricultural field.

19. Brief notes on characterization and mass production of phosphate solubilizing microbes.

20. Explain in detail about field application of Ectomycorrhizae and VAM.

